

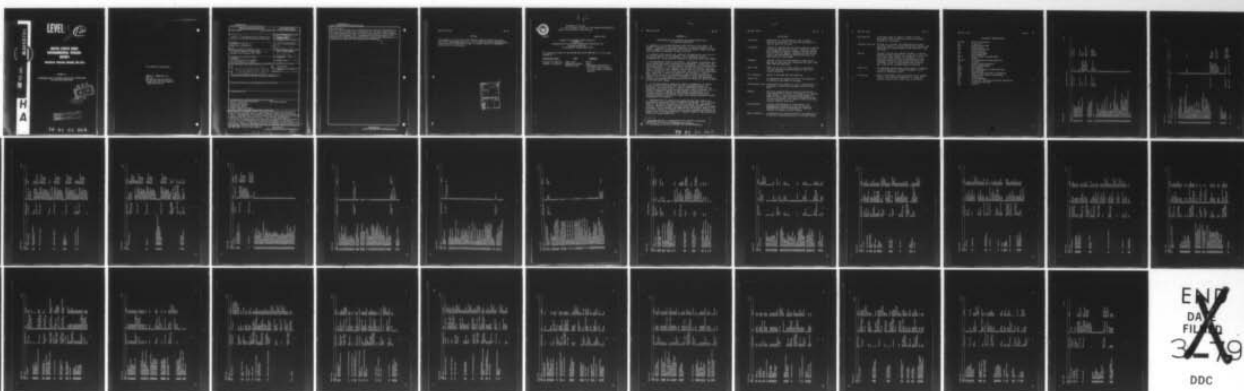
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ARMY ENVIRONMENTAL HYGIENE AGENCY ABERDEEN PROVING GR--ETC F/G 6/5
MEDICAL SURVEILLANCE GUIDE (GUIDE FOR JOB-RELATED EXAMINATIONS)--ETC(U)
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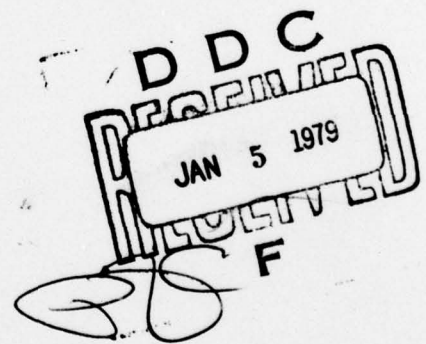
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**UNITED STATES ARMY
ENVIRONMENTAL HYGIENE
AGENCY**

ABERDEEN PROVING GROUND, MD 21010

APPENDIX G

**RECOMMENDATIONS FOR PERIODIC JOB-RELATED EXAMINATIONS
FOR SELECTED OCCUPATIONS**



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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This appendix recommends periodic job-related examinations for Department of Army civilian employees based on General Schedule or Wage Grade employee job titles. Recommendations are further based on the usual activities of individuals employed under the various job titles. To utilize the recommendations efficiently and appropriately, the actual job the individual holding a particular job title is performing must be carefully considered. In the event of unusual or special circumstances, the activities embodied in certain job titles may change. Similarly, the simple fact that an individual holds a certain		

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job title does not imply that recommendations are necessarily appropriate for that particular individual in his particular job. In these cases, periodic job-related examinations should be altered to accomodate the actual characteristics of the individual's job. Recommendations are further based on the assumption that other aspects, besides periodic job-related examinations, of a comprehensive occupational health program are implemented.

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PREFACE

This appendix is a revision to this Agency's Medical Surveillance Guide (Guide for Job-Related Examinations for Selected Occupations, January 1975). Other additions to this guide as well as further revisions of existing portions will be forthcoming.

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DEPARTMENT OF THE ARMY
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY MAJ Thomasino/mlo/584-2714
ABERDEEN PROVING GROUND, MARYLAND 21010

January 1979

Change to the November 1978 Printing of
APPENDIX G
Recommendations for Periodic Job-Related Examinations for
Selected Occupations
(to the Medical Surveillance Guide)

The examination format for the determining factor ASBESTOS is, in all cases, changed to:

<u>Determining Factor</u>	<u>Exam</u>	<u>Frequency</u>
Asbestos (if exposure exceeds 0.1 fiber/cc)	Chest x-ray Pulmonary functions Sputum cytology	Annual Annual Preplacement and annual if 45 years of age or older or 10 or more years of asbestos exposure.

APPENDIX G

Recommendations for Periodic Job-Related Examinations
for Selected Occupations*

1. Appendix G is oriented differently than the rest of this guide. As opposed to focusing on individual exposures, this section focuses on job titles. Chosen for inclusion were job titles for General Schedule and Wage Grade employees at Department of Army activities.
2. Included in this section are a glossary of abbreviations and a list of definitions specific to this appendix. Also included are specific recommendations listed by General Schedule or Wage Grade series code number.†
3. The presentation format is as follows: Pay Schedule, Occupational Code, Title, Determining Factor, Examination, and Frequency. In most cases, the Determining Factor is a specific exposure although other variables also enter into consideration. It is imperative to note that the factors listed are usual. This does not mean, however, that a factor is invariably associated with the occupation, nor, on the other hand, are claims of all-inclusiveness made. Naturally, if one of the factors is not relevant at a specific installation, the part of the examination geared to that exposure may be deleted. Also, if the operation is different or unique, the appropriate examinations (obtained from preceding sections of the Guide) should be added to the examination format.
4. In all cases where an examination format is recommended, an interim history should be obtained at the time the recommended procedure is performed. The interim history, a short history which focuses upon the symptom complexes which might be expected from a specific exposure, e.g., a history of asthmatic symptoms in those exposed to isocyanates, is an invaluable adjunct to any medical surveillance program and should be performed though not specifically listed in the various examination formats recommended in this section.
5. Recommendations are based on the assumption that other aspects of a comprehensive occupational health program are implemented. This especially refers to the hearing conservation, vision screening, and immunization programs. Where one of these procedures would almost certainly be required, audiograms, vision screening, and immunizations are depicted; however, this by no means includes all possible noise or visual exposures and assumes, for example, that all persons subjected to repeated trauma are immunized against tetanus per current guidelines.

* Supersedes Appendix G, Recommendations for Periodic Job-Related Examinations for Selected Occupations, April 1975.

† As designated by the United States Civil Service Commission.

DEFINITIONS

Age Related	Quadrennial for those 39 years of age or younger, biennial for those 40 to 49 years old, and annual for those 50 years old and over.
As Required	A factor or condition may exist which requires a specific job-related examination or action. Potential diversity and uniqueness of operation, however, preclude specific guidance from this Agency. Determination must be made locally and from appropriate guidance extracted from other sections of this guide.
Audiogram	Includes a record of the threshold of audibility of each ear for pure tone test frequencies 500, 1000, 2000, 3000, 4000 and 6000 Hertz.
Chest X-ray	Refers to 14- by 17-in films taken at a distance of 6 ft and including a posterior-anterior and a left lateral projection.
Cholinesterase	Refers to red blood cell cholinesterase.
Dental Exam	An examination the purpose of which is the detection of pitting of the enamel of the teeth.
Dermatological Exam	An examination the purpose of which is the detection of dermatoses or potentially contagious lesions of the skin.
Emphasis	Particular attention must be placed on the specific organ system which is cited. For example, G.I. emphasis might include: a medical history which focuses on alcoholic intake, past exposures to hepatotoxins, and past hospitalizations; and a physical examination which stresses abdominal organ size.
Eye Evaluation	Includes a determination of visual acuity. An ophthalmoscopic examination of the eye should be performed by a qualified professional if abnormal findings are present on acuity testing.
Nasal Examination	An examination the purpose of which is the detection of ulcerative or perforating lesions of the nasal septum.

None Required	In the usual case, no factor or condition exists which would require a specific periodic job-related examination or procedure.
Pulmonary Functions	Includes, at a minimum, the determination of Forced Expiratory Volume in 1 second, Forced Vital Capacity, and comparison with expected norms for the individual's age and height.
Routine	Includes a history (both medical and work), a physical examination which includes vital signs and an evaluation of all major organ systems, an audiogram, a vision screening, a chest x-ray (to be accomplished no more frequently than every 4 years except when otherwise indicated), an EKG in those greater than 35 years of age, a CBC and UA, and other tests as indicated.
Stress Test	The submaximal determination of work capacity employing a bicycle ergometer or treadmill followed by an EKG. Similar to the Master's Test.
TB Testing	Refers to intradermal testing by either of two methods (Tine or PPD) unless the individual is a known skin reactor, in which case a chest x-ray is indicated.

GLOSSARY OF ABBREVIATIONS

ALK PO ₄	Alkaline Phosphatase
AR	As Required
BUN	Blood Urea Nitrogen
CV	Cardiovascular
CBC	Complete Blood Count
CO	Carbon Monoxide
EKG	Electrocardiogram
GI	Gastrointestinal
GGTP	Gamma Glutamyl Transpeptidase
Hx	History
IAW AR	In accordance with Army regulation
IR	Infrared
IV	Intense Visible Radiation
LDH	Lactic Dehydrogenase
Misc.	Miscellaneous
MOCA	4,4'-Methylene bis (2-chloroaniline)
NR	None Required
SGOT	Serum Glutamic Oxalacetic Transaminase
SGPT	Serum Glutamic Pyruvic Transaminase
TB	Tuberculosis
TNT	Trinitrotoluene
UA	Urinalysis, including microscopic examination
UV	Ultraviolet Radiation
Var.	Various

GENERAL SCHEDULE EMPLOYEES

GS Series	Title	Determining Factor	Exam	Frequency
007	Correctional Officer	physical stress	routine	age-related
018	Safety Management		AR	
019	Safety Technician		AR	
023	Community Planner		NR	
026	Outdoor Recreation Planning		NR	
030	Park Aid/Technician	physical stress	routine	age-related
030	Sports Specialist	formalin	AR	annual
050	Funeral Director/Mortuary Officer	TB	pulmonary functions dermatological exam IAW AR 40-26	annual
		infectious disease	tetanus and diphtheria immunization	basic series then every 10 yrs
062	Clothing Designer		NR	
072	Fingerprint Clerk/Examiner		AR	
080	Security Administration		NR	
081	Fire Protector and Prevention		NR	
083	Police	physical stress, CO	routine	age-related
		smoke	pulmonary functions	age-related
		physical stress	routine	age-related
		noise	audiogram	annual
		do	do	do
085	Guard		AR	
099	General Student Trainee		NR	
101	Social Science		NR	
110	Economist		NR	
130	Foreign Affairs		NR	
131	International Relations		NR	
132	Intelligence		NR	
142	Manpower Development Specialist		NR	
150	Geographer		NR	
160	Equal Opportunity Specialist/Officer		NR	
170	Historian		NR	
180	Psychologist		NR	
181	Psychology Aid/Technician		NR	
184	Sociologist		NR	
185	Social Worker		NR	
186	Social Services Aid/Assistant		NR	
187	Social Work Associate/Social Service Representative		NR	
188	Recreation Specialist		AR	
189	Recreation Aid/Assistant		AR	
190	Anthropologist		NR	
193	Archeologist		NR	
199	Social Science Student Trainee		NR	
200	Personnel Management/Industrial Relations		NR	
203	Personnel Clerk/Assistant		NR	
204	Military Personnel Clerk/Technician		NR	
205	Military Personnel Management		NR	
246	Contractor Industrial Relations		NR	
300	General Administrative Clerical, Office Services		NR	
301	Clerk		NR	
302	Messenger		NR	

GS Series	Title	Determining Factor	Exam	Frequency
304	Information/Receptionist		NR	
305	Mail/File Clerk		NR	
309	Correspondence Clerk		NR	
312	Clerk Stenographer/Shorthand Reporter		NR	
316	Clerk-Dictating Machine Transcriber		NR	
318	Secretary		NR	
322	Clerk-Typist		NR	
324	Cold Type Composing Machine Operator		NR	annual
330	Digital Computer Systems Administrative Services		NR	
332	Computer Operations	noise	audiogram	
334	Computer Specialist		NR	
335	Computer Aid/Technician		NR	
341	Administrative Officer		NR	
342	Office Service Manager		NR	
343	Management Analyst		NR	
344	Management Clerk/Assistant		NR	
345	Program Analyst		NR	
346	Logistics Management Specialist		NR	
351	Printing Clerk		NR	
355	Calculating Machine Operator		NR	
356	Data Transcriber		NR	
357	Coding Clerk		NR	
359	Electric Accounting Machine Operator		NR	
362	Electric Accounting Machine Project Planning		NR	
382	Telephone Operating		NR	
391	Communications Management Specialist		NR	
392	Communications Control Technician		NR	
393	Communications Specialist		NR	
401	General Biological Science		NR	
403	Microbiologist	infectious disease	AR	annual basic series preplacement
			influenza immunization Rubella immunization (all susceptible individuals except pregnant females) tetanus and diphtheria immunization IAW AR 40-26	basic series then every 10 yrs
404	Biology Aid/Technician		AR	
405	Pharmacologist		AR	
410	Zoologist		AR	
413	Physiologist		AR	
414	Entomologist	organophosphates	cholinesterase	baseline, then as required following potential exposure annual
		organic solvents	SGOT, SGPT, ALK PO ₄ , CBC	
430	Botanist		AR	

GS Series	Title	Determining Factor	Exam	Frequency
434	Plant Pathologist		AR	
435	Plant Physiologist		AR	
437	Horticulturist		AR	
440	Geneticist		AR	
454	Range Conservationist/Scientist		NR	
455	Range Technician/Aid		NR	
456	Forest and Range Fire Control	physical stress, CO smoke noise	routine pulmonary functions audiogram	age-related annual
457	Soil Conservationist		NR	
458	Soil Conservation Aid/Technician		NR	
460	Forester		NR	
462	Forestry Aid/Technician		NR	
470	Soil Scientist	physical stress noise	routine audiogram	age-related annual
471	Agronomy		NR	
475	Agricultural Management		NR	
481	Fishery Biologist		AR	
486	Wildlife Biologist		AR	
487	Husbandry		AR	
501	Accounting Clerk		NR	
504	Budget and Accounting Officer		NR	
505	Financial Manager		NR	
510	Accounting		NR	
520	Accounts Maintenance Clerk		NR	
525	Accounting Technician		NR	
530	Cash Accounting		NR	
540	Voucher Examining		NR	
541	Fiscal Accounting		NR	
544	Payroll Clerk/Technician		NR	
545	Military Payroll Clerk/Technician		NR	
547	Benefit Payment Roll Clerk/Technician		NR	
560	Budget Analyst/Officer		NR	
570	Financial Institution Examining		NR	
590	Time and Leave Clerk/Technician		NR	
591	Military Time and Leave Clerk/Technician		NR	
599	Student Trainee (Accounting)		NR	
601	General Health Services		AR	
602	Medical Officer	infectious disease	influenza immunization tetanus and diphtheria immunization Rubella immunization (all susceptible individuals except pregnant females) IAM AR 40-26 do	annual basic series then every 10 yrs basic series preplacement do
603	Physician's Assistant	TB do	do	do

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Series	Title	Determining Factor	Exam	Frequency
644	Medical Technologist	misc. chemicals	SGOT, SGPT, ALK P04, LDH, CBC, UA, Creatinine, BUN AR	annual
645	Medical Laboratory Aid/Technician	do	do	do
646	Pathology Technician	formalin	pulmonary functions dermatological exam	annual
		infectious disease	tetanus and diptheria immunization	basic series then every 10 yrs
647	Medical Radiology Technology	TB	IAT AR 40-26	annual
		infectious disease	influenza immunization tetanus and diptheria immunization	basic series then every 10 yrs
			Rubella immunization (all susceptible individuals except pregnant females)	basic series preplacement
		TB	IAT AR 40-26	
		X radiation	personal monitoring device	monthly
649	Medical Machine Technician	infectious disease	IAT AR 40-14; AR 40-501 (7-17, 11-8)	annual
			influenza immunization tetanus and diptheria immunization	basic series then every 10 yrs
			Rubella immunization (all susceptible individuals except pregnant females)	basic series preplacement
660	Pharmacist	TB	IAT AR 40-26	
661	Pharmacy Technician		NR	
662	Optometrist	infectious disease	influenza immunization tetanus and diptheria immunization	annual
			Rubella immunization (all susceptible individuals except pregnant females)	basic series then every 10 yrs
			IAT AR 40-26	basic series preplacement
664	Restoration Technician	TB	dermatological exam	annual
665	Speech Pathology and Audiology	acrylic resins noise noise infectious disease	audiogram	annual
			influenza immunization tetanus and diptheria immunization	annual
			Rubella immunization (all susceptible individuals except pregnant females)	basic series then every 10 yrs
			IAT AR 40-26	basic series preplacement

GS Series	Title	Determining Factor	Exam	Frequency
667	Orthotist-Prosthetist	noise brazing: UV, IR, IV, metal, flux fumes	audiogram eye evaluation chest x-ray	annual annual biennial, annual if exposure exceeds 10 yrs
		infectious disease	pulmonary functions urinalysis influenza immunization tetanus and diphtheria immunization Rubella immunization (all susceptible individuals except pregnant females)	annual annual annual basic series then every 10 yrs basic series preplacement
668	Podiatrist	TB infectious disease	IAW AR 40-26 influenza immunization tetanus and diphtheria immunization Rubella immunization (all susceptible individuals except pregnant females) IAW AR 40-26 NR	annual basic series then every 10 yrs basic series preplacement
669	Medical Record Librarian	TB	NR	
670	Hospital Administrator/Assistant/Officer/Specialist		NR	
673	Hospital Housekeeping Management		NR	
675	Medical Record Technician		NR	
680	Dental Officer	infectious disease	influenza immunization tetanus and diphtheria immunization Rubella immunization (all susceptible individuals except pregnant females) IAW AR 40-26	annual basic series then every 10 yrs basic series preplacement
		TB mercury (if exposure exceeds 0.02 mg/m ³) X radiation	urine mercury personal monitoring device IAW AR 40-14; AR 40-501 (7-17, 11-8)	annual monthly
		waste anesthetic gases	CBC, SGOT, SGPT, ALK P04, LDH, UA, Creatinine, BUN	annual
		noise	audiogram	annual
		do	do	do
		acrylic resins	dermatological exam	annual
		noise	audiogram	annual
681	Dental Assistant			
682	Dental Hygienist			
683	Dental Lab Aid/Technician			

GS Series	Title	Determining Factor	Exam	Frequency
688	Sanitarian	raw sewage	typhoid immunization	basic series then triennial
690	Industrial Hygienist		AR	
698	Environmental Health Aid/Technician	infectious disease	AR	annual
699	Health Aid/Technician		Influenza immunization tetanus and diphtheria immunization	basic series then every 10 yrs
			Rubella immunization (all susceptible individuals except pregnant females)	basic series preplacement
			IAW AR 40-26	
701	Veterinarian	TB	tetanus	basic series then every 10 yrs
		infectious disease	rabies	basic series then every 2-3 yrs
			IAW AR 40-26	
801	General Engineer		AR	
802	Engineering Aid/Technician		AR	
803	Safety Engineer		AR	
804	Fire Prevention Engineer		AR	
806	Materials Engineer		AR	
807	Landscape Architect		NR	
808	Architect		NR	
809	Construction Inspector/Representative		AR	
810	Civil Engineer		AR	
817	Surveying Aid/Technician		NR	
818	Engineering Draftsman		NR	
819	Sanitary Engineer		AR	
828	Construction Analyst		NR	
830	Mechanical Engineer		AR	
840	Nuclear Engineer		AR	
850	Electrical Engineer		AR	
855	Electronics Engineer		AR	
856	Electronics Technician		AR	
858	Biomedical Engineer		AR	
861	Aerospace Engineer		AR	
871	Naval Architect		NR	
880	Mining Engineer		AR	
881	Petroleum Engineer		AR	
890	Agricultural Engineer		AR	
892	Ceramic Engineer		AR	
893	Chemical Engineer		AR	
894	Welding Engineer		AR	
895	Industrial Engineering Technician		AR	
896	Industrial Engineer		AR	
899	Engineering Student Trainee		AR	
930	Hearings and Appeals Position		NR	
950	Paralegal Specialist		NR	
962	Contact Representative		NR	
963	Legal Instruments Clerk/Examiner		NR	

GS	Series	Title	Determining Factor	Exam	Frequency
	996	Legal Clerk/Technician		NR	
	998	Claims Clerk		NR	
	1001	Interior Decorator/Color Designer		NR	
	1010	Exhibits Specialist		AR	
	1015	Museum/Staff Curator		AR	
	1016	Museum Aid/Technician/Specialist		AR	
	1020	Illustrator		NR	
	1021	Office Draftsman		NR	
	1045	Translator		NR	
	1051	Music Specialist		AR	
	1054	Theatre Specialist		AR	
	1056	Art Specialist		NR	
	1060	Photographer		NR	
	1071	Audiovisual Production		SGOT, SGPT, ALK P04, BUN	annual
	1081	Public Information Officer/Specialist		LDH, UA, Creatinine, BUN	
	1082	Writer/Editor		NR	
	1083	Technical Writer/Editor		NR	
	1084	Visual Information Officer/Specialist		NR	
	1087	Editorial Clerk/Assistant		NR	
	1102	Contract and Procurement		NR	
	1103	Industrial Property Management/		NR	
	1104	Administration Specialist		AR	
	1105	Property Disposal		NR	
	1107	Purchasing Agent		AR	
	1130	Property Disposal Clerk/Technician		NR	
	1135	Public Utilities Assistant/Specialist		NR	
	1140	Transportation Industry Analyst		NR	
	1144	Trade Assistant/Specialist		NR	
	1147	Commissary Store Manager/Officer		NR	
	1150	Agricultural Market Commodity Reporter		NR	
	1152	Industrial Specialist		NR	
	1160	Production Control/Controller Aid		NR	
	1163	Financial Assistant/Analyst		NR	
	1165	Insurance Examiner		NR	
	1170	Loan Assistant/Specialist		NR	
	1171	Realty Specialist		NR	
	1173	Appraiser		NR	
	1221	Housing Project Manager/Assistant		NR	
	1301	Patent Advisor		NR	
	1306	Physical Scientist		NR	
		Health Physicist		AR	
			var. radionuclides X radiation	bioassays personal monitoring device IAM AR 40-14; AR 40-501 (7-17, 11-8) AR	as appropriate monthly
	1310	Physicist		AR	
	1311	Physical Science Aid/Technician		AR	
	1313	Geophysicist		AR	

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GS	Series Title	Determining Factor	Exam	Frequency
1315	Hydrologist		AR	
1316	Hydrology Aid/Technician		AR	
1320	Chemist		SGOT, SGPT, ALK P04, CBC, annual LDH, UA, Creatinine, BUN	
1321	Metallurgist		AR	
1330	Astronomy and Space Science		AR	
1340	Meteorologist		NR	
1341	Meteorology Aid/Technician		NR	
1350	Geologist		NR	
1360	Oceanographer		NR	
1361	Aeronautical/Marine Information Specialist		NR	
1370	Cartographer Aid/Technician		NR	
1371	Geodesist		NR	
1372	Land Surveyor		NR	
1373	Geodetic Aid/Technician		NR	
1380	Forest Production Technician		AR	
1382	Food Technologist		AR	
1384	Cotton/Fiber Technologist		AR	
1386	Photographic Technologist		AR	
1397	Document Analyst		NR	
1399	Physical Science Student Trainee		AR	
1410	Librarian		NR	
1411	Library Aid/Technician		NR	
1412	Technical Information Specialist/Officer		NR	
1420	Archivist		NR	
1421	Archives Aid/Technician/Specialist		NR	
1510	Actuary		NR	
1515	Operations Research Analyst		NR	
1520	Mathematician		NR	
1521	Mathematics Aid/Technician		NR	
1529	Mathematical Statistician		NR	
1530	Statistician		NR	
1531	Statistical Clerk/Assistant		NR	
1541	Cryptanalyst		NR	
1599	Mathematical Science Student/Trainee		NR	
1601	General Facilities and Equipment		NR	
1640	Facility Management Officer/Specialist		NR	
1641	Building and Grounds Manager		NR	
1654	Printing Assistant/Specialist/Officer		NR	
1658	Laundry/Dry Cleaning Plant Manager/ Superintendent		NR	
1666	Housekeeping		NR	
1667	Steward		NR	
1670	Equipment Specialist		NR	
1701	General Education and Training		IAM AR 40-5	
1702	Education Aid/Technician		NR	
1710	Educational and Vocational Training		NR	
1712	Training Instructor/Administrator/Specialist		AR	
		misc. chemicals		
		potential hazard to others		

Series	Title	Determining Factor	Exam	Frequency
1715	Vocational Rehabilitation Specialist		AR	
1720	Educational Assistant/Specialist		NR	
1810	Investigator	physical stress	routine audiogram	age-related annual
1811	Criminal Investigator	noise	do	do
1820	Safety Inspector	do	AR	
1899	Boiler Inspector		NR	
1900	General Commodities Quality Control		AR	
1903	Quality Control and Inspection Management		NR	
1905	Substance Quality Control and Inspection		NR	
1906	Clothing, Textile and Leather Quality Control and Inspection		AR	
1910	Quality Assurance Specialist		AR	
1915	Chemicals Quality Control and Inspection		AR	
1916	Petroleum Quality Control and Inspection		AR	
1920	Materials Quality Control and Inspection		AR	
1925	Electrical Equipment Quality Control and Inspection		AR	
1926	Electronic Equipment Quality Control and Inspection		AR	
1940	Mechanical Equipment Quality Control and Inspection		AR	
1941	Automotive Equipment Quality Control and Inspection		AR	
1942	Aircraft Quality Control and Inspection		AR	
1947	Ordnance Quality Control and Inspection		AR	
1948	Ammunition Quality Control and Inspection		AR	
1950	Missile Quality Control and Inspection		AR	
1955	Space System Quality Control and Inspection		AR	
1960	Quality Inspection Specialist		AR	
1961	Calibration and Measurement Quality Control and Inspection		AR	
1965	Metallic Materials Treatment Processes Quality Control and Inspection		AR	
1970	Preservation and Packaging Quality Control and Inspection		AR	
1980	Agricultural Commodity Grader		NR	
2131	Packaging Specialist		NR	
2040	Supply Clerk		NR	
2100	Transportation Clerk		NR	
2130	Traffic Manager/Management Specialist		NR	
2132	Freight Rate Assistant/Specialist		NR	
2133	Passenger Rate Assistant/Specialist		NR	
2144	Cargo Scheduler		NR	
2150	Automotive Transport Specialist/Administrator		NR	
2151	Motor Vehicle/Auto Equipment Dispatcher		NR	
2152	Air Traffic Control Specialist	noise	IAM AR 40-501 audiogram	annual
2161	Marine Cargo Assistant/Specialist		IAM AR 40-501	
2181	Aircraft Operator		IAM AR 40-501	

WG Series	Title	Determining Factor	Exam	Frequency
2502	Telephone Mechanic	physical stress, heights	routine	age-related
2504	Wire Communications Cable Splicing		AR	
2506	Telephone Equipment Inspector		NR	
2508	Telephone Lineman	physical stress, heights	routine	age-related
2509	Teletypewriter Installing and Repairing	noise	audiogram	annual
2510	Wire Chief		AR	
2511	Wire Communications Equipment Installer and Repairer		NR	
2512	Wire Communications Equipment Inspector		NR	
2513	Cryptographic Equipment Installer and Repairer		NR	
2514	Automatic Telegraph Communications Switching Equipment Installing and Repairing		NR	
2602	Electronic Test Equipment Repairer/Maker/ Installer		NR	
2603	Electron Tube Making	X radiation	personal monitoring device IAW AR 40-14; AR 40-501 (7-17, 11-8)	monthly
2605	Mine Control Systems Repairer	UV, IV, IR	eye evaluation	annual
2606	Radar Equipment Inspector	metal and flux fumes	pulmonary functions chest x-ray urinalysis	annual biennial annual
		microwave	NR ophthalmoscopic exam, slit lamp exam of lens, preplacement and termina- tion determination of best visual acuity eye evaluation	preplacement and termination annual
2609	Radio Equipment Inspecting		NR	
2612	Fire Control Instrument Inspector	laser	IAW AR 40-46	
2614	Electronic Mechanic	microwave	ophthalmoscopic exam, slit lamp exam of lens, preplacement and termina- tion determination of best visual acuity eye evaluation	preplacement and termination annual
2615	Electronic Equipment Inspector	noise	NR	annual
2616	Motion Picture Sound Transmission Installer and Repairer	noise	audiogram	annual
2619	Electronic-Mechanical Communications Equipment Installer and Repairer	noise	audiogram	annual
2621	Toll Office Telephone Equipment Installer and Repairer		NR	
2650	Electrical Integrated Systems Mechanic		NR	

WG	Series	Title	Determining Factor	Exam	Frequency
	2702	Crystal Cutter	silica	pulmonary functions TB testing chest x-ray	annual annual biennial, annual if exposure exceeds 10 yrs do do do do do do do do do annual
	2703	Crystal Etcher and Oiler	do	do	do
	2704	Crystal Finisher	do	do	do
	2705	Crystal Inspector	do	do	do
	2706	Crystal Lapper	do	do	do
	2707	Crystal Orientator	do	do	do
	2708	Crystal Technician	do	do	do
	2802	Electrician, Marine	noise	audiogram	annual
	2804	Electrician Inspector		NR	
	2805	Electrician	physical stress, heights	routine	age-related
	2810	Electrician (high voltage)	noise	audiogram	annual
	2854	Electrical Equipment Repairer		NR	
	2902	Public Address Equipment Operator		NR	
	2903	Radio Transmitter Operator		NR	
	3103	Shoe Repairing	noise	audiogram	annual
	3105	Fabric Worker	noise	audiogram	annual
	3106	Upholsterer	do	do	do
	3111	Sewing Machine Operator	do	do	do
	3114	Mattress Repairer	do	do	do
	3120	Parachute Inspector	do	NR	do
	3121	Parachute Packer		NR	
	3122	Leather Products Inspector		NR	
	3124	Floor Coverer		NR	
	3202	Auto Glass Repairer		NR	
	3203	Glazer		NR	
	3204	Glassblower	UV, IR	eye evaluation	annual
	3306	Optical Instrument Repairer		NR	
	3307	Nautical Instrument Repairer		NR	
	3309	Timekeeping Instrument Repairer		NR	
	3310	Industrial Instrument Inspector		NR	
	3359	Instrument Mechanic	noise	audiogram	annual
	3403	Model Maker, Metal	noise	audiogram	annual
	3405	Pattern Maker, Metal	noise	audiogram	annual
	3406	Buffing and Polishing	cutting oils	dermatological exam	annual
	3407	Coil or Wire Machine Operating	do	do	do
	3416	Automotive Machinist	do	do	do
	3412	Instrument Maker and Repairer	do	do	do
	3413	Machined Parts Inspecting	do	do	do
	3414	Machinist	noise	NR	
			cutting oils	audiogram	annual
			metal fumes and dusts	dermatological exam	annual
				pulmonary functions	annual
				chest x-ray	biennial
			do	do	do
			do	do	do
			noise	audiogram	annual
	3416	Tool Maker			
	3417	Tool Grinding and Repairing			
	3420	Layout Man			
	3422	Power Saw Operating			

MS Series	Title	Determining Factor	Exam	Frequency
3428	Die Sinker	noise UV, IV, IR	audiogram eye evaluation	annual annual
3430	Tool and Gage Checker	physical stress	routine	age-related
3431	Machine Tool Operator	noise	audiogram	annual
3433	Machine Tool Inspecting	cutting oils	dermatological exam	annual
3502	Laborer	do	do	do
3566	Janitor	noise	audiogram	annual
3602	Cement Finisher	physical stress cleaning solutions	routine	age-related
3603	Mason	noise	dermatological exam	annual
3604	Tile Setting	noise	audiogram	annual
3605	Plasterer	cement	dermatological exam	annual
3606	Roofer	epoxy resins	dermatological exam	annual
		heights	NR	
		coal tar pitch	routine	age-related
		volatiles	chest x-ray	biennial, annual if exposure exceeds 10 yrs
3608	Molder, Materials		pulmonary functions	annual
3609	Floor Layer	cement	urinalysis	annual
3653	Asphalt Worker		dermatological exam	annual
			dermatological exam	annual
			NR	
		coal tar pitch	chest x-ray	biennial, annual if exposure exceeds 10 yrs
		volatiles		
3702	Flame Cutter	noise	pulmonary functions	annual
		noise	urinalysis	annual
		UV, IR, IV	dermatological exam	annual
		metal and flux fumes	audiogram	annual
			eye evaluation	annual
			pulmonary functions	annual
			chest x-ray	biennial
			urinalysis	annual
			blood lead	semiannual
		lead (painted surfaces, if exposure exceeds 0.05 mg/m ³)	CBC, UA	annual
		do	do	do
		do	do	do
3703	Welder	noise	audiogram	annual
3704	Blacksmith	X radiation	personal monitoring device	monthly
3705	Welding Inspector	silica	pulmonary functions	annual
3706	Core Maker		TB testing	annual
			chest x-ray	biennial, annual if exposure exceeds 10 yrs

WG Series	Title	Determining Factor	Exam	Frequency
3707	Metallizing	UV, IR, IV noise metal fumes	eye evaluation audiogram pulmonary functions chest x-ray urinalysis pulmonary functions TB testing chest x-ray	annual annual annual biennial annual annual annual biennial, annual if exposure exceeds 10 yrs annual annual annual annual biennial annual age-related annual age-related annual
3708	Foundry worker	silica		
3709	Cast Room Working	UV, IR, IV noise	eye evaluation audiogram pulmonary functions chest x-ray urinalysis routine AR	annual annual annual annual annual annual annual
3710	Furnace Tender, Foundry	noise metal fumes	audiogram pulmonary functions chest x-ray urinalysis routine AR	annual annual annual annual annual annual annual
3711	Electroplater	physical stress, heat noise physical stress, heat chromium and nickel	audiogram pulmonary functions chest x-ray urinalysis routine AR dermatological and nasal exam	annual annual annual annual annual annual annual annual
3712	Heat Treater	acid mists misc. solvents oil mist noise physical stress, heat noise	sputum cytology pulmonary functions chest x-ray dental exam SGOT, SGPT, ALK, PO ₄ , CBC dermatological exam audiogram routine audiogram AR	annual annual annual triennial annual annual annual annual annual age-related annual
3713	Chipper		AR	
3714	Molder		AR	
3715	Smelter		AR	
3716	Leadburner	physical stress, heat lead (if exposure exceeds 0.05 mg/m ³) UV, IR, IV metal and flux fumes	routine blood lead CBC, UA eye evaluation chest x-ray pulmonary functions urinalysis blood lead CBC, UA audiogram audiogram audiogram personal monitoring device IAW AR 40-14; AR 40-501 (7-17, 11-8)	age-related semiannual annual annual biennial annual annual annual semiannual annual annual annual annual monthly
3720	Brazer and Solderer	lead (if exposure exceeds 0.05 mg/m ³) noise noise noise X radiation		
3721	Shrink Pit Operator			
3722	Cold Worker			
3723	Casting Machine Operator			
3724	Casting Inspector			

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ICG Series	Title	Determining Factor	Exam	Frequency
3725	Battery Repairer	acids and acid mists lead (if exposure exceeds 0.05 mg/m ³)	dental exam blood lead CBC, UA	triennial semiannual annual
3802	Drop Hammer Operating	noise	audiogram	annual
3803	Punch Press Operating	noise	audiogram	annual
3804	Coppersmithing	noise	audiogram	annual
3805	Metal Products Inspector	noise	NR	annual
3806	Sheet Metal Mechanic	noise welding: UV, IV, IR metal and flux fumes	audiogram eye evaluation pulmonary functions chest x-ray urinalysis	annual annual annual biennial annual annual
		lead (painted surfaces, blood lead if exposure exceeds 0.05 mg/m ³)	blood lead CBC, UA	semiannual annual
3807	Structural Iron Worker	do	do	do
3808	Boilermaker	physical stress noise welding: UV, IR, IV metal and flux fumes	routine audiogram eye evaluation urinalysis pulmonary functions chest x-ray pulmonary functions	age-related annual annual annual annual biennial annual
		asbestos (if exposure exceeds 0.1 fibers/cc)	chest x-ray sputum cytology TB testing pulmonary functions chest x-ray	annual annual annual biennial, annual if exposure exceeds 10 yrs annual
3809	Mobile Equipment Metal Mechanic	noise welding: UV, IV, IR metal and flux fumes	audiogram eye evaluation urinalysis pulmonary functions chest x-ray	annual annual annual biennial, annual if exposure exceeds 10 yrs annual
		silica	TB testing pulmonary functions chest x-ray	annual annual biennial, annual if exposure exceeds 10 yrs annual
3810	Forgings Heater	oil mist heat noise UV, IV, IR	dermatological exam routine audiogram eye evaluation AR	annual age-related annual annual annual
3812	Press Operator	noise	audiogram	annual
3813	Forgings Inspector	noise	NR	annual

Series	Title	Determining Factor	Exam	Frequency
3814	Automotive/Engineer Equipment Radiator Repairer	noise UV, IR, IV metal and flux fumes	audiogram eye evaluation chest x-ray pulmonary functions urinalysis blood lead CBC, UA audiogram audiogram	annual annual biennial annual annual semiannual annual annual annual
3815	Riveter	lead (if exposure exceeds 0.05 mg/m ³)		
3820	Shipfitter	noise	NR	
3902	Make-up Artist	noise	NR	annual
3903	Studio Grip	noise	NR	annual
3904	Studio Sound Room Man	noise	NR	annual
3905	Property Man	noise	NR	annual
3906	Property Man Drapery	noise	NR	annual
3907	Property Man Wardrobe	noise	NR	annual
3908	Scenic Artist	noise	NR	annual
3909	Motion Picture Film Inspector and Reclaimer	organic solvents	SGOT, SGPT, ALK P04, CBC	annual
3910	Motion Picture Projectionist	lead (if exposure exceeds 0.05 mg/m ³)	blood lead	semiannual
3911	Sound Recording Equipment Operator	isocyanates (urethane)	CBC, UA	annual
3912	Motion Picture Negative Worker		total eosinophil count	annual
3913	Motion Picture Developing Machine Operator		pulmonary functions	annual
3914	Motion Picture Printing Machine Operator	noise	audiogram	annual
3915	Film Slitting Machine Operator	misc. photographic chemicals	NR	
3916	Film Cleaning Machine Operator	do	NR	
3917	Magnastripe Applying Machine Operator	misc. photographic chemicals	SGOT, SGPT, ALK P04, LDH, UA, Creatinine, BUN	annual
3918	Film Searcher		do	do
3919	TV Control and Equipment Operator	noise	NR	
4002	Cementing (Optical Elements)	epoxy resins	audiogram	annual
4003	Blocking (Optical Elements)	noise	dermatological exam	annual
4005	Polishing (Optical Elements)	noise	audiogram	annual
4006	Grinding (Optical Elements)	noise	audiogram	annual
4007	Plating (Optical Elements)		NR	
4009	Lens Coating (Optical Elements)	noise	AR	
4010	Spectacle Lens Bench Working	noise	audiogram	annual
4011	Spectacle Lens Surfacing	noise	audiogram	annual
4012	Optical Etching		NR	
4015	Optical Element Inspector	organic solvents	SGOT, SGPT, ALK P04, CBC	annual
4102	Painter	lead (if exposure exceeds 0.05 mg/m ³)	blood lead	semiannual
		isocyanates (urethane)	CBC, UA	annual
			total eosinophil count	annual
			pulmonary functions	annual
4103	Paperhanging		NR	

Series Title	Determining Factor	Exam	Frequency
4104 Sign Painter	organic solvents lead (if exposure exceeds 0.05 mg/m ³) isocyanates (urethane)	SGOT, SGPT, ALK P ₀₄ , CBC blood lead CBC, UA total eosinophil count pulmonary functions do audiogram chest x-ray	annual semi-annual annual annual do annual annual
4105 Paint Miller	noise		
4203 Insulator	asbestos (if exposure exceeds 0.1 fiber/cc)		
4204 Pipefitter	heat noise asbestos (if exposure exceeds 0.1 fiber/cc)	pulmonary functions sputum cytology routine audiogram chest x-ray	annual annual age-related annual annual
4206 Plumber	lead (if exposure exceeds 0.05 mg/m ³) raw sewage lead (if exposure exceeds 0.05 mg/m ³) raw sewage asbestos (if exposure exceeds 0.1 fiber/cc)	sputum cytology pulmonary functions blood lead CBC, UA typhoid immunization blood lead CBC, UA typhoid immunization chest x-ray	annual annual semi-annual annual basic series then triennial semi-annual annual basic series then triennial annual
4303 Model Making (Plastic)	noise		
4351 Plastic Molding	noise thermosetting, epoxy resins isocyanates (urethane) polyvinyl chloride (if vinyl chloride exposure exceeds 0.5 ppm) MOCA	sputum cytology pulmonary functions audiogram dermatological exam total eosinophil count pulmonary functions routine with GI emphasis, bilirubin, SGOT, SGPT, GGTP, ALK P ₀₄ , LDH	annual annual annual annual annual annual, semi-annual if exposure exceeds 10 yrs
4352 Plastic Working	dichlorobenzidine	chest x-ray sputum cytology urinary cytology SGOT, SGPT, LDH, ALK P ₀₄ , bilirubin	annual annual annual annual
4353 Plastic Working Inspector	do	urinary cytology SGOT, SGPT, LDH, ALK P ₀₄ , bilirubin urinalysis AR do NR	annual annual annual annual do

US Series Title	Determining Factor	Exam	Frequency
4402 Binding Working	noise	audiogram	annual
4403 Composer	noise lead (if exposure exceeds 0.05 mg/m ³) methylene chloride inks	audiogram blood lead CBC, UA routine with CV emphasis dermatological exam	annual annual annual age-related annual annual age-related annual
4404 Draftsman, Offset	noise methylene chloride inks	audiogram routine with CV emphasis dermatological exam	annual age-related annual
4405 Film Assembly-Stripping	misc. photographic chemicals	AR SGOT, SGPT, ALK P04, LDH, UA, Creatinine, BUN dermatological exam	annual annual
4406 Press Operator, Printing	noise lead (if exposure exceeds 0.05 mg/m ³) methylene chloride inks	audiogram blood lead CBC, UA routine with CV emphasis dermatological exam	annual annual annual semiannual annual age-related annual
4407 Linotype Operating	do	AR	do
4408 Relief Model Reproduction Mounting	noise	AR	AR
4409 Monotype Casting Machine Operator and Repairer	noise lead (if exposure exceeds 0.05 mg/m ³) methylene chloride inks	audiogram blood lead CBC, UA routine with CV emphasis dermatological exam	annual annual annual age-related annual
4411 Monotype Keyboard Operator	noise	AR	annual
4412 Heliograph Operator	noise	audiogram	annual
4413 Negative Engraver	IV	NR	annual
4414 Photography (Offset)	IV	NR	annual
4415 Plate Graining	IV	NR	annual
4416 Plate Making	noise	eye evaluation	annual
4417 Press Operating Offset	noise	eye evaluation	annual
4418 Printing Plant Equipment Mechanic	noise misc. solvents inks	audiogram SGOT, SGPT, ALK P04, CBC dermatological exam	annual annual annual annual
4419 Silk Screen Printer	misc. solvents inks	AR SGOT, SGPT, ALK P04, CBC dermatological exam	annual annual
4420 Transferrar	do	AR	do
4421 Chemical Mixer	misc. chemicals	SGOT, SGPT, ALK P04, LDH, UA, CBC, Creatinine, BUN	annual
4422 Dot Etcher	misc. solvents inks	AR SGOT, SGPT, ALK P04, CBC dermatological exam	annual annual

MS Series	Title	Determining Factor	Exam	Frequency
4423	Pantographer	noise misc. solvents	audiogram SGOT, SGPT, ALK P ₀₄ , LDH, UA, CBC, Creatinine, BUN dermatological exam	annual annual annual
4424	Multigraph Operator	inks	AR	do
4425	Photoengraver	do	do	do
4426	Relief Map Model Maker	do	AR	do
4427	Xerox Operating	inks	AR	annual
4428	Blueprinting and Diazo Equipment Operating	misc. chemicals	dermatological exam SGOT, SGPT, ALK P ₀₄ , LDH, CBC, UA, Creatinine, BUN	annual annual
4429	Photostat Operating	do	AR	do
4430	Microphotography Working	misc. photographic chemicals	SGOT, SGPT, ALK P ₀₄ , LDH, UA, Creatinine, BUN NR	annual
4431	Photocomposition Machine Operating		NR	
4432	Compositor (Paste-up)		NR	
4502	Tire and Tube Inspector	benzene (if exposure exceeds 0.5 ppm)	CBC, platelet count bilirubin, reticulocyte count	semiannual & preplacement preplacement
4503	Rubber Products Fabricator and Repairer	var. chemicals noise	audiogram	annual
4504	Tire and Tube Repairing	benzene (if exposure exceeds 0.5 ppm)	CBC, platelet count bilirubin, reticulocyte count	semiannual & preplacement preplacement
4507	Rubber Products Inspector	var. chemicals	AR	semiannual & preplacement
4508	Rubber Compounder	benzene (if exposure exceeds 0.5 ppm)	CBC, platelet count bilirubin, reticulocyte count	semiannual & preplacement preplacement
4554	Rubber Equipment Repair	var. chemicals	AR	semiannual & preplacement
4602	Blocker and Bracer	physical stress noise	routine audiogram	age-related annual
4603	Boat Repairer	noise lead (if exposure exceeds 0.05 mg/m ³)	audiogram blood lead CBC, UA	annual annual annual
4604	Woodworker	noise	audiogram	annual
4605	Woodcraftsman	noise	audiogram	annual
4606	Carpenter, Manual	noise	audiogram	annual
4607	Carpenter	noise	audiogram	annual
4608	Sawmill Operator	noise	audiogram	annual
4610	Carpenter, Studio	noise	audiogram	annual
4613	Furniture Repairer	methylene chloride misc. solvents	audiogram routine with CV emphasis SGOT, SGPT, ALK P ₀₄ , CBC, UA, Creatinine, BUN	annual annual annual
		isocyanates	pulmonary functions total eosinophil count audiogram	annual annual annual
		noise		annual

MS Series	Title	Determining Factor	Exam	Frequency
4614	Model Maker, Wood	noise	audiogram	annual
4616	Patternmaker	noise	audiogram	annual
4618	Woodworking Machine Operator	noise	audiogram	annual
4619	Wood Body Repairer	noise	audiogram	annual
4620	Shoe Last Repairer	noise	audiogram	annual
4622	Crating Inspector	noise	audiogram	annual
4623	Gun Stock Maker and Finisher	methylene chloride misc. solvents	routine with CV emphasis SGOT, SGPT, ALK, PO ₄ , CBC, UA, Creatinine, BUN	annual
		isocyanates	pulmonary functions total eosinophil count	annual
4702	Construction Supervising	noise	audiogram	annual
4703	Construction and Maintenance Supervising	noise	audiogram	annual
4704	Maintenance Supervising	noise	audiogram	annual
4705	Maintenance Inspector	noise	NR	annual
4706	River and Harbor Construction Supervising	noise	audiogram	annual
4712	Instrument Maker		AR	
4714	Model Maker		AR	
4742	Utilities Systems Repairer-Operator	noise	audiogram	annual
4749	Maintenance Mechanic		AR	
4802	Musical Instrument Repairer		AR	
4803	Fire Extinguisher Servicing		AR	
4804	Garden Equipment Repairing		AR	
4805	Medical Equipment Repairer	noise X radiation	audiogram personal monitoring device IAW AR 40-14; AR 40-501 (7-17, 11-8)	annual monthly
4806	Office Appliance Repairer	noise	audiogram	annual
4807	Chemical Equipment Repairer		AR	
4808	Custodial Equipment Repairer		NR	
4810	Sponging Equipment Repairing	textile finishes	dermatological exam	annual
4811	Musical Instrument Inspecting		AR	
4812	Saw Reconditioner	noise brazing: UV, IV, IR metal and flux fumes	NR audiogram eye evaluation chest x-ray	annual annual biennial, annual if exposure exceeds 10 yrs
4813	Office Appliance Inspector			
4814	Survey Equipment Repairer		pulmonary functions urinalysis audiogram	annual annual annual
4815	Chemical Equipment Inspector	noise	NR	
4816	Protective and Safety Equipment Fabricator and Repairer		AR	
4817	Protective and Safety Equipment Inspector		AR	
5003	Gardener		AR	
5004	Cemetery Caretaking		AR	

Series	Title	Determining Factor	Exam	Frequency
5026	Pest Controller	organophosphates	cholinesterase	baseline, prior to spraying season then annually or quarterly depending on toxicity of pesticides used
5031	Insects Production Worker	mobile equipment operation	routine AR	annual
5210	Rigger	noise	audiogram AR	annual
5212	Laboratory Worker	physical stress, heights	routine	age-related
5220	Shipwright	noise	audiogram	annual
5303	Asbestos Working	noise	audiogram AR	annual
5306	Air Conditioning Equipment Mechanic	physical stress, heights	audiogram	age-related
5307	Shoe Machine Repairing	asbestos (if exposure exceeds 0.1 fiber/cc)	routine	annual
5308	Gas Appliance Repairer	refrigerant gases	sputum cytology chest x-ray	annual
5309	Heating and Boiler Plant Equipment Mechanic	noise	pulmonary functions routine with CV emphasis	annual
		noise	audiogram	age-related
		noise	audiogram	annual
		noise	audiogram	annual
		welding: UV, IV, IR	eye evaluation	annual
		metal and flux fumes	pulmonary functions	annual
		lead (if exposure exceeds 0.05 mg/m ³)	chest x-ray	biennial
		coal tar pitch	urinalysis	annual
		volatiles	blood lead	semiannual
			CBC, UA	annual
			pulmonary functions	annual
			sputum cytology	annual
			chest x-ray	biennial, annual if exposure exceeds 10 yrs
		noise	dermatological exam	annual
		coal dust	audiogram	annual
			chest x-ray	biennial, annual if exposure exceeds 10 yrs
		silica	pulmonary functions	annual
			chest x-ray	biennial, annual if exposure exceeds 10 yrs
		asbestos (if exposure exceeds 0.1 fiber/cc)	pulmonary functions TB testing	annual
			chest x-ray	biennial, annual if exposure exceeds 10 yrs
			sputum cytology	annual
			pulmonary functions	annual
5311	Locksmith		NR	annual

MS Series	Title	Determining Factor	Exam	Frequency
5312	Sewing Machine Repairer	noise	audiogram	annual
5313	Elevator Mechanic	petroleum products	dermatological exam	annual
5314	Gasoline Distribution Equipment Repairer	tetraethyl lead	urine lead	semi-annual
		benzene (if exposure exceeds 0.5 ppm)	CBC, UA	annual
			CBC, platelet count	semi-annual & preplacement
			bilirubin, reticulocyte count	preplacement
5317	Laundry and Dry Cleaning Equipment Mechanic	noise	audiogram	annual
		perchloroethylene	SGOT, ALK P04, LDH, SGPT, bilirubin	annual
5318	Lock and Dam Maintenance and Repairing	noise	audiogram	annual
5320	Coffee Plant Equipment Mechanic	noise	AR	annual
5321	Laundry and Dry Cleaning Equipment Inspector	noise	audiogram	annual
		perchloroethylene	SGOT, ALK P04, LDH, SGPT, bilirubin	annual
5322	Refrigeration and Air Conditioning Equipment Inspector	refrigerant gases	routine with CV emphasis	age-related
5313	Oilier and Greaser	cutting oils	dermatological exam	annual
		noise	audiogram	annual
5324	Hydroelectric Powerhouse Mechanical Equipment Repairer	cutting oils	audiogram	annual
		physical stress, heights	dermatological exam	annual
5326	Bridge Repairer	noise	audiogram	age-related
		organic solvents	audiogram	annual
		lead (if exposure exceeds 0.05 mg/m ³)	SGOT, SGPT, ALK P04, CBC	annual
		isocyanates (urethane)	blood lead	semi-annual
			CBC, UA	annual
			total eosinophil count	annual
			pulmonary functions	annual
5352	Equipment Mechanic	noise	audiogram	annual
5378	Powered Support Systems Mechanic	noise	AR	annual
5402	Boiler Fireman	physical stress, heat, CO	audiogram	age-related
		coal dust	routine with CV emphasis	age-related
			chest x-ray	biennial, annual
				if exposure exceeds 10 yrs
5402	Boiler Plant Operator	noise	pulmonary functions	annual
		physical stress, heat, CO	audiogram	annual
		noise	routine with CV emphasis	age-related
		do	audiogram	annual
5403	Incinerator Operator	noise	do	annual
5404	Operating Engineer, Gas Systems	noise	AR	do
5406	Utility Systems Operator	noise	AR	do
5407	Electric Power Controller	noise	AR	do

Series Title	Determining Factor	Exam	Frequency
5408 Sewage Disposal Plant Operator	raw sewage	typhoid immunization	basic series then triennial
	chlorine	dental exam	age-related annual
5409 Water Treatment Plant Operator	chlorine	routine with CV emphasis pulmonary functions	annual
		dental exam	age-related triennial
5410 Asphalt Plant Operator	physical stress	routine with CV emphasis pulmonary functions	annual
	coal tar pitch	routine	age-related annual
	volatiles	chest x-ray	biennial, annual if exposure exceeds 10 yrs
		pulmonary functions	annual
		urinalysis	annual
		dermatological exam	annual
5411 Air Compressor Operator	noise	audiogram	annual
5412 Coal Unloader Operator	physical stress	routine	age-related annual
	noise	audiogram	annual
	coal dust	chest x-ray	biennial, annual if exposure exceeds 10 yrs
5413 Fuel Distribution Systems Operating	petroleum products	pulmonary functions	annual
	tetraethyl lead	dermatological exam	annual
	benzene (if exposure exceeds 0.5 ppm)	urine lead	semiannual
		CBC, UA	annual
		CBC, platelet count	semiannual & preplacement
		bilirubin, reticulocyte count	preplacement
5414 Baling Machine Operator	noise	audiogram	annual
5415 Refrigeration and Air Conditioning Equipment Operator	refrigerant gases, cold lubricating fluids	routine with CV emphasis dermatological exam	age-related annual
5416 Coffee Plant Equipment Operator	noise	audiogram	annual
5417 Parts and Equipment Steam Cleaner Operator	noise	audiogram	annual
5420 Alum Plant Operator	Kaolin, coal shale dust	chest x-ray	biennial, annual if exposure exceeds 10 yrs
		pulmonary functions	annual
5422 Fumigating and Decontaminating Equipment Operating	sulfuric acid mist	dental exam	triennial
5423 Sandblaster	silica	chest x-ray	biennial, annual if exposure exceeds 10 yrs
		pulmonary functions	annual
	noise	TB testing	annual
	heat	audiogram	annual
		routine	age-related

MS Series	Title	Determining Factor	Exam	Frequency
5424	Weighing Machine Operator	noise	NR	annual
5426	Lock and Dam Operator		audiogram	
			AR	
5427	Chemical Plant Equipment Operator	noise	AR	annual
5428	Biological Plant Operator		AR	
5430	Bridge Operator		NR	
5431	Furnace Tender, Popping Plant	phosphine	audiogram	annual
5432	Fish Facility Operator		NR	
5433	Oxygen/Acetylene Plant Operator		x-ray of lower jaw dental exam	
5434	Baking Equipment Operator	potential hazard to others	CBC	annual
5435	Carton and/or Bag Mixing Machine Operator	noise	IAM AR 40-5	annual
5436	Sponging Equipment Operator	noise	audiogram	annual
		textile finishes	audiogram	annual
5437	Paper Processing Machine Operator	asbestos (if exposure exceeds 0.1 fiber/cc)	dermatological exam	annual
		paper finishes	AR	annual
5439	Elevator Operator		chest x-ray	annual
5439	Materials and/or Products Tester		pulmonary functions	annual
5440	Packaging Machine Operator		sputum cytology	annual
5502	Drilling Machine Operator		dermatological exam	annual
			AR	NR
5503	Scalper Machine Operator	noise	AR	annual
5505	Crusher Operating	noise	audiogram	annual
5703	Motor Vehicle Operator	silica	audiogram	biennial, annual
			chest x-ray	if exposure exceeds 10 yrs
5704	Forklift Operator	do	pulmonary functions	annual
		do	TB testing	annual
5705	Tractor Operator	potential hazard to others	do	do
		CO	do	age-related
		noise	routine	age-related
		potential hazard to others	routine with CV emphasis	age-related
		noise	audiogram	annual
		noise	audiogram	age-related
5706	Road Sweeper Operator	noise	audiogram	annual
5707	Tank Driving	do	do	do
5713	Concrete or Mortar Mixing Operator	noise	do	do
5715	Diesel Tender Operator	concrete	audiogram	annual
		potential hazard to others	audiogram	age-related
		noise	audiogram	annual
5716	Engineering Equipment Operator	do	do	do
5725	Crane Operator	do	do	do
5718	Crane Groundsman	do	do	do
5729	Drill Rig Operator	noise	audiogram	annual

US Series	Title	Determining Factor	Exam	Frequency
5730	Core Drill Inspector	noise	audiogram	annual
5732	Pneumatic Tool Operating	noise	audiogram	annual
5802	Engineer Equipment Inspecting	potential hazard to others	routine	age-related
5803	Heavy Mobile Equipment Mechanic	noise	audiogram	annual
5806	Mobile Equipment Servicer	noise	audiogram	annual
5808	Combat Vehicle Inspector	noise	audiogram	annual
5809	Combat Vehicle Mechanic-Fuel and Electrical Systems	noise	audiogram	annual
5814	Automotive Equipment Inspecting	CO	audiogram	annual
5818	Automotive or Engineer Equipment Repairing-Fuel and Electrical Systems	noise	NR	age-related
5823	Automotive Mechanic	noise	audiogram	annual
5827	Drill Equipment Repairer	noise	audiogram	annual
5857	Powered Ground Equipment Repairer	noise	audiogram	annual
5858	Powered Ground Equipment Inspector	noise	audiogram	annual
5902	Amphibian Truck Operator	potential hazard to others	audiogram	age-related
5903	Boat Operating	noise	audiogram	annual
5904	Bucket Dredge Operator	do	do	do
5905	Deck Equipment Operator	noise	audiogram	annual
5906	Deckhand	organic solvents	SGOT, SGPT, ALK P ₀₄ , LDH, CBC	annual
		lead (if exposure exceeds 0.05 mg/m ³)	blood lead	semi-annual
		isocyanates (urethane)	CBC, UA	annual
			total eosinophil count	annual
			pulmonary functions	annual
			AR	annual
5907	Derrickboat Operator	potential hazard to others	audiogram	age-related
5908	Dipper Dredge Operator	noise	audiogram	annual
5909	Dredging Equipment Operating	do	do	do
5910	Barge Operator	do	do	do
5911	Engineer, Diesel	noise	audiogram	annual
5912	Engineer, Diesel Electric	noise	audiogram	annual
5913	Engineer, Steam	noise	audiogram	annual
5914	Engineer, Steam Electric	noise	audiogram	annual
5915	Fireman-Water Tender	physical stress, heat, CO	audiogram	age-related
5916	Hyacinth Removal Plant Operator	noise	audiogram	annual
5917	Master-Mate Mopper Dredge	noise	audiogram	annual
5918	Master-Mate Large Survey Boats, Tugs	do	AR	do
5919	Master-Mate Pipeline Dredge	do	do	do
5920	Pile Driver, Floating Plant	potential hazard to others	audiogram	age-related
		noise	audiogram	annual

Series Title	Determining Factor	Exam	Frequency
5921 Pilot	noise	audiogram	annual
5922 Pipeline Man	noise	audiogram	annual
5923 Quartermaster	noise	AR	annual
5924 Revetment Working	noise	audiogram	annual
5925 Shipkeeping	concrete	audiogram	annual
5926 Wiper-Officer	cutting oils	dermatological exam	annual
5927 Quarterboat Utilities Operator	noise	dermatological exam	annual
5928 Scowman	noise	audiogram	annual
5929 Master-Mate Snagboat	noise	AR	do
5930 Debris Worker, Marine	noise	do	annual
5931 Dockhand	noise	audiogram	annual
5932 Dockmaster	noise	audiogram	annual
6003 Brakeman and Conductor	noise	audiogram	annual
6004 Locomotive Engineer	potential hazard to others	audiogram	annual
	coal dust	chest x-ray	age-related
			biennial, annual if exposure exceeds 10 yrs
6006 Yardmaster	noise	pulmonary functions	annual
6102 Locomotive Electrical Systems Repairing	physical stress	NR	age-related
6103 Locomotive Inspecting	noise	audiogram	annual
6104 Locomotive Repairing	cutting oils	audiogram	annual
	organic solvents	dermatological exam	annual
6105 Railroad Car Repairing	lead (if exposure exceeds 0.05 mg/m ³)	SGOT, SGPT, ALK PO ₄ , LDH, CBC	annual
	isocyanates (urethane)	blood lead	semi-annual
		CBC, UA	annual
		total eosinophil count	annual
6106 Railroad Repairer	noise	pulmonary functions	annual
	physical stress	audiogram	age-related
6150 Railroad Maintenance Vehicle Operator	noise	audiogram	annual
	potential hazard to others	audiogram	annual
6202 Fender Maker	noise	audiogram	age-related
6206 Loftsmen	hyperbaric conditions	NR	annual
6207 Pier Facilities Worker	noise	audiogram	annual
6208 Diver	noise	IAW AR 40-501	annual
6210 Marine Equipment Inspector	noise	audiogram	annual

UG Series	Title	Determining Factor	Exam	Frequency
6502	Explosives Operator	TNT nitroglycerine	SGOT, LDH hemoglobin or hematocrit routine with CV emphasis EKG stress test	quarterly quarterly age-related semiannual only if EKG or Hx of ischemic heart disease annual annual annual
6505	Munitions Destroyer	tetryl	pulmonary functions dermatological exam audiogram	do
6506	Ammunition Loading Inspector	noise	AR	do
6507	Powder and Explosives Inspector	do	AR	do
		TNT	SGOT, LDH, ALK, PO ₄ , SGPT, bilirubin hemoglobin or hematocrit routine with CV emphasis EKG stress test	quarterly quarterly age-related semiannual only if EKG or Hx of ischemic heart disease annual annual do
		nitroglycerine		
		tetryl	pulmonary functions dermatological exam	do
		do	do	do
6511	Munitions Handler	TNT	SGOT, LDH, SGPT, ALK, PO ₄ , bilirubin hemoglobin or hematocrit routine with CV emphasis EKG stress test	quarterly quarterly age-related semiannual only if EKG or Hx of ischemic heart disease annual annual do
6512	Toxic Materiel Handler	nitroglycerine		
6514	Surveillance Inspector			
		tetryl	pulmonary functions dermatological exam	do
		indoor ranges: CO lead (if exposure exceeds 0.05 mg/m ³) noise	NR routine with CV emphasis blood lead CBC, UA audiogram	age-related semiannual annual annual annual
6515	Small Arms Ammunition Inspector	noise	NR	annual
6517	Explosives Test Operator	physical stress	audiogram routine	age-related annual
6604	Artillery Inspector	noise	AR	annual
6605	Artillery Repairer	noise	audiogram	annual
6606	Civilian Gunner	noise	audiogram	annual
6610	Small Arms Repairer	test firing: CO lead (if exposure exceeds 0.05 mg/m ³)	routine with CV emphasis blood lead CBC, UA NR	age-related semiannual annual annual annual
6609	Small Arms Inspector	noise	audiogram	annual
6611	Mechanical Fuze Installer and Repairer	noise	NR	annual
6613	Guided Missile Mechanical Inspector	noise	audiogram	annual
6641	Ordnance Equipment Mechanic	noise	audiogram	annual
6652	Aircraft Ordnance Systems Mechanic	noise	audiogram	annual

MS Series	Title	Determining Factor	Exam	Frequency
6702	Shop Checking		NR	
6703	Production Planner		NR	
6704	Production Estimator	physical stress	NR	age-related
6705	Materials Expediter		NR	
6706	Expenditure Underwriting		NR	
6902	Lumber Handler	noise	audiogram	annual
6903	Coal Handling	coal dust	pulmonary functions chest x-ray	annual biennial, annual if exposure exceeds 10 yrs
6904	Tools and Parts Attendant		NR	
6907	Warehouseman	CO	NR	age-related
6910	Warehouse Forklift Operating	noise	audiogram	annual
6911	Salvage Processor and Laborer	cutting torch: UV, IV, IR	AR	annual
6912	Material Sorter and Classifier	metal and flux fumes	pulmonary functions urinalysis	annual annual biennial
		lead (if exposure exceeds 0.05 mg/m ³)	chest x-ray blood lead CBC, UA	semi-annual annual
		noise	audiogram	annual
7002	Packer		NR	
7003	Packing Inspector		NR	
7004	Preservation Packager		NR	
7005	Processing Inspector		AR	
7006	Preservation Servicer		AR	
7009	Equipment Cleaner		AR	
		noise	audiogram	annual
		acid mists	dental exam	annual triennial
7304	Laundry Worker		AR	
7305	Laundry Machine Operator	noise	audiogram	annual
7306	Presser	heat	routine	age-related
		do	do	do
		noise	audiogram	annual
		heat	routine	age-related
		perchloroethylene	SGOT, ALK PO ₄ , SGPT, LDH, bilirubin	annual
		do	do	do
7307	Dry Cleaning		NR	
7351	Laundry Operating	potential hazard to others	IAM AR 40-5	
7403	Baker	heat	routine	age-related
		potential hazard to others	IAM AR 40-5	
7404	Cook	do	do	do
		do	do	do
7405	Bartender	cold	do	age-related
7406	Dough Mixer	noise	audiogram	age-related
7407	Meatcutter	potential hazard to others	IAM AR 40-5	annual

US Series	Title	Determining Factor	Exam	Frequency
7408	Food Service Worker	potential hazard to others	IAW AR 40-5	
7409	Fat Rendering		NR	
7410	Ice Cream Maker	potential hazard to others	IAW AR 40-5	
7503	Mortuary Attending	formalin	pulmonary functions dermatological exam tetanus and diphtheria immunization	annual annual basic series then every 10 yrs
		infectious disease	IAW AR 40-26	
7504	Ward Attending	TB	influenza immunization tetanus and diphtheria immunization	annual basic series then every 10 yrs
		infectious disease	Rubella immunization (all susceptible individuals except pregnant females)	basic series preplacement
			IAW AR 40-26	
7602	Store Worker		NR	
7603	Barber	TB	NR	
7605	Shoe Fitting		NR	
7606	Personal Servicing		AR	
7640	Bus Attending		NR	
7641	Beautician		NR	
7702	Teamster		NR	
7704	Rider, Horse		NR	
7705	Trainer, Horse and Mule		NR	
7706	Animal Caretaker	physical stress infectious disease	routine tetanus immunization	age-related basic series then every 10 yrs basic series then every 2-3 yrs
			rabies immunization	
8255	Pneumatic Systems Mechanic	TB	IAW AR 40-26	annual
8260	Aircraft Pneumatic Systems Mechanic	noise	audiogram	annual
8852	Aircraft Mechanic	noise	audiogram	annual

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DEPARTMENT OF THE ARMY
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY
ABERDEEN PROVING GROUND, MARYLAND 21010

May 1979

Change 2 to the October 1978 Printing of
APPENDIX G
Recommendations for Periodic Job-Related Examinations for
Selected Occupations
(to the Medical Surveillance Guide)

The examination format for the determining factor LEAD is, in all cases, changed to:

<u>Determining Factor</u>	<u>Exam</u>	<u>Frequency</u>
Lead (if exposure exceeds .03 mg/m ³ for more than 30 days annually).	Blood lead	Semiannual (bimonthly if last blood lead exceeded 39 µg/100g; within 2 weeks of blood lead level of 50-80 µg/100g*; monthly during period worker is removed from exposure due to elevated blood lead).
	Physical examination emphasis on blood pressure, teeth, gums, hematologic, gastrointestinal, renal, CV and neurological systems, CBC, blood lead, BUN, creatinine, UA.	Annual (if blood lead exceeded 39 µg/100g in past 12 months).

*NOTE: - Until 1 Mar 1980, workers who, on repeat blood lead testing following a blood lead level at or above 80 µg/100g, have a blood lead level at or above 80 µg/100g and are exposed to 8-hour TWA concentration of 0.1 mg Pb/m³ or greater should be removed from work involving exposure to lead until 2 consecutive blood lead levels, drawn within 1 month of each other are at or below 60 µg/100g.

- From 2 Mar 1980 - 1 Feb 1981, workers who, on repeat blood lead testing following a blood lead level at or above 70 µg/100g, have a blood lead level at or above 70 µg/100g and are exposed to an 8-hour TWA concentration of 0.05 mg Pb/m³ or greater should be removed from work involving exposure to lead until 2 consecutive blood lead levels, drawn within 1 month of each other are at or below 50 µg/100g.

APPENDIX G

- From 2 Mar 1981 - 1 ^{MAR}~~FEB~~ 1983, workers who, on repeat blood lead testing following a blood lead at or above 60 µg/100g, have a blood lead level at or above 60 µg/100g should be removed from work involving exposure to lead until 2 consecutive blood lead levels, drawn within 1 month of each other, are at or below 40 µg/100g.
- From 2 Mar 1983 onward, workers who, on repeat blood lead testing following a blood lead at or above 50 µg/100g, have a blood lead level at or above 50 µg/100g should be removed from work involving exposure to lead until 2 consecutive blood lead levels, drawn within 1 month of each other, are at or below 40 µg/100g. See Final Standard, Occupational Exposure to Lead, 43 Federal Register (FR) 53010-53012, 14 November 1978 and Occupational Exposure to Lead; Notice of Partial Judicial Stay, 44 FR 14554-14555, 13 March 1979, for complete explanation of medical surveillance requirements.